

# **DEACTIVATION SPECIFICATIONS**

## **FOR TANKERS**

**T1-MET-24a**

## **APPLICABLE TO**

**M/V ALATNA (T-AOG 81)**

**and**

**M/V CHATTAHOOCHEE (T-AOG 82)**

**PHASE V DEACTIVATION**

# M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

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## M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

### 100 GENERAL

### 105 GENERAL NOTES

Contractor shall prepare a detailed deactivation schedule which includes labor, crafts, equipment and material. The schedule shall include each item of these specifications.

During the deactivation the Contractor shall provide a suitable berth and provide the following services:

#### 1 Services:

- a. Fire Protection: provide three (3) fire stations at bow, amidships, and stern with 100 psi pressurized manifolds and enough hose fitted with all-purpose type nozzles to reach all weather deck and internal locations on the vessel.
- b. Electric Power: 300 amps, 440 volts AC, 3 phase, 60 hertz.

**CAUTION** Proper phasing shall be insured immediately upon connection to prevent damage to the equipment.

2. Office Space: provide separate dockside office space for CMS and MARAD representatives. Each office to have a minimum of 50 square meters of floor space, be adequately lighted, heated and air-conditioned. Each office is to be furnished with a minimum of two desks and chairs, one file cabinet, one book shelf, two steel hanging lockers, one meeting/service table with four chairs; 100 - 120 VAC, 50 to 60 Htz electrical power is to be supplied from a minimum of four, two plug jacks with ground; one each phone for overseas direct dialing, one local phone for domestic and international calls; Western Style male and separate female toilets and washing facilities are to be available close to the designated offices.
3. Meals and Accommodations and Transportation: Provide Western style rooms and meals (breakfast, lunch, and dinner) per the following schedule:
  - a. MARAD and CMS Representatives, total six each single rooms with private baths, for total 12 nights with option to hold two or more rooms for a period of 180 days following deactivation's of any one or all vessels. These rooms are to be equipped with a telephone capable of international calls by direct dialing and credit cards, one each computer modem connection to each phone, 24 hour satellite TV reception with at least one English news and separate movie/entertainment channel, and a small service refrigerator.
  - b. Total six ship's officers, single rooms with private baths for a total of eight nights. The rooms to include telephone for local and international calls, and local channel TV entertainment.

105    GENERAL NOTES continued

- c.     Eight crew (2 persons per room), estimated six nights with shared bath facilities. Telephones to be coded for local calls only. A TV for local channel entertainment shall be provided in each room.
- d.     Hotel services shall include daily bed and linen changing, room and bath cleaning, days; and transportation between accommodation to/from vessel for meals, morning and evening if the walking distance exceeds 1 kilometer one way. Charges for laundry, meals, telephone, room refrigerator drinks and snacks, and other miscellaneous hotel services are to be billed directly to each occupant.
- 4..    Vessel Telephones: provide 24 hour telephones: one (1) phone for ship's office, and one (1) Contractor/local phone for ship's quarter-deck. The and ship's office phone shall be provided with International direct dialing service; these phones shall be available within 24 hours of the Notice of Activation.
- 5.     Garbage and Debris Removal: Contractor to provide garbage bins or dumpsters onboard the vessel for collection and removal on a daily basis. Where port regulations apply, additional collection bins shall be provided as required for separation and/or recycling. Written notice of the requirements, in English, shall be made available to the CMS Representative and ship's master at the beginning of each activation.
- 6.     Firewatch: required for all burning, welding, and heating operations. Firewatch shall be equipped with suitable Contractor furnished fire extinguisher and shall be aware of the nearest fire hose. Access to the Contractor UHF radio system is highly desirable.
- 7.     Cleaning: the Contractor shall remove on a daily basis all dirt and debris generated as a result of work specified. Any and all damage to ship's paint, tile, structure, fixtures, equipment, and machinery occurring in Contractor's yard shall be restored per ship's painting specifications at the Contractor's expense.
- 8.     Crane Service: Contractor shall provide crane and rigging service for handling stores and ship's equipment. The service shall consist of crane and operator and a 2-man rigging crew. A total of 40 hours crane and rigging service shall be used for estimating purposes (40 hours crane, 40 hours operator, 80 hours rigging). Hours and cost will be adjusted upward or downward, as appropriate, at end of the activation.
- 9.     Labor and Materials: Contractor shall provide labor, materials and services to accomplish all work in these items unless otherwise specified. Hourly labor rates by category and material costs shall be included in the Contractor's tariff or as documented in the Contractor's contract.

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105 GENERAL NOTES continued

10. Government Furnished Material: the Contractor shall take delivery of all Government Furnished Material (GFM), whether stored on board ship or delivered to the Contractor's covered storage yard or warehouse, and shall store, preserve, and protect it as required. The Contractor shall provide a secure storage area for those items removed from the ship during activation, and operation to include hull and topside blanks; cathodic protection system; D/H system hoses and fittings; stack covers; and flooding alarm equipment.
11. Workmanship: all materials and workmanship shall be in accordance with good marine practice, regulatory requirements, and this specification.
12. Testing: the Contractor shall be responsible for pre-testing all work and for timely notification of the CMS Representative and cognizant ship's officer of all events that will require on-site inspection. Successful tests only will be accepted. Any pre-testing required shall be at Contractor's expense.
13. Schedule: The Contractor shall perform the deactivation work required by this specification in a timely and efficient manner; all work shall be performed on straight time, except where overtime is required for the convenience of the Contractor and is completed at no additional expense to the owner.
14. Deck Protection: Provide suitable temporary deck protection on interior passageways, master's office, chief engineer's office, crew mess, officers mess, and other high traffic areas as designated by the CMS Representative. A minimum of 6 mm thick protective covering, securely taped to the deck may be used.
15. Gas Free Certification: One the first day of activation a certified chemist shall inspect all ships cargo, void, tank, bilge, storerooms to ascertain that they are, or are not, safe for entry, including burning and welding. Results shall be posted at the ship's gangway, delivered to the MarAd and CMS Representatives, the vessel's master and chief engineer. Daily and frequent re-inspections shall be made of all suspect, sensitive and confined work areas of the vessel. Daily reports are to be distributed per the above. Please note the specific referrals to gas free certification in the following specifications.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 109      DELIVERY OF SHIP

Unless specifically requested by the Contractor, and agreed to by the MarAd and/or CMS Representatives, the vessel shall be activated at its assigned lay-berth.

1. In the event that it is agreed to move the vessel, the Contractor shall provide the following services:
  - a. Marine Safety Agency and local Harbor Master clearances;
  - b. Pilots, tugs, line handlers and riding crew;
  - c. Towing tugs, escort tugs, locally required lights, signals and other regulatory requirements.
  - d. Electricians and engineers to supervise shore connections and ships' generator utilization.

CAUTION      Proper phasing shall be insured immediately upon connection to prevent damage to the equipment.

ITEM 111      MOORING OF VESSEL

1. At Minimum, the vessel shall have available three each braided or three-strand, minimum 8 inch circumference, synthetic mooring lines forward and aft, as necessary for safe and secure mooring. Additionally, for the purpose of nesting the tankers, two "Yokohama" type fenders are available on each vessel. The mooring berth shall provide adequate clearance under the keel for all stages of tide. Additional services and facilities shall include:
  - a. Salt or fresh water fire main under continuous pressure for emergency service at a minimum of 100 psi.
  - b. Commercial fresh or potable water service line.
  - c. Adequate lighting for night boarding and disembarking.
  - d. Adequate free and clear vehicle access to the vessel.
  - e. Telephone service line Per Item 105.4 above.
  - f. Electric power per Item 105.1 above.

Unless specifically requested by the Contractor, and agreed to by the MarAd and/or CMS Representatives, the vessel shall be deactivated at its assigned lay-berth.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 116:     LIVING AND WORKING SPACES

1.     Clean all spaces throughout ship. Hand wash with detergent and industrial disinfectant all surfaces in living spaces. Sweep and mop decks. Remove all trash from quarters and living spaces. Clean interior of all refrigerators.
2.     The mattresses in crew quarters, officers' staterooms, and hospital shall be turned on end or propped up in their bunks to allow for air circulation.
3.     Provide Contractor for insect and rodent inspection, and control at initial deactivation. Place traps and fumigate as required.
4.     The ship's crew will collect, bag and inventory all soiled ship's linen. The Contractor shall remove the dirty linen to a shore facility for cleaning, inventory review, bagging and return to the vessel. The Contractor shall store onboard per the CMS Representative. The soiled linen is estimated to be:
  - a.     75 bath towels
  - b.     85 single bed sheets
  - c.     50 single bed blankets
  - d.     52 pillow cases
  - e.     40 each 1.0 x 2.0 meter shag carpets
  - f.     12 each steward's aprons
  - g.     8 each steward's caps
  - h.     12 each steward's jackets
  - j.     15 each 1.5 x 3.0 meter linen table cloths

ITEM 120     OPEN ITEM



M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

200

ENGINEERING

ITEM 205

DIESEL ENGINES - EMERGENCY AND MAIN GENERATORS

DATA:

Main Propulsion Engine - Two Each  
Mfr.: ALCO Power Inc.  
Model: 12-251-E  
Bore and Stroke: 9 in. x 10 1/2 in.  
RPM: 900  
Single Acting-Four Stroke Cycle-Turbo Supercharged

Generator Engines - Three Each  
Mfr.: Caterpillar  
Model: D353 - 6 cyl.  
Bore and Stroke: 6 1/4 in. x 8 in.

Emergency Generator Engine - One Each  
Mfr.: Caterpillar  
Model: D326F - 6 Cyl.  
Bore and Stroke: 5-2/8 in. x 6-1/2 in.  
RPM: 1200

Contractor shall provide labor, material and equipment to accomplish the work necessary for deactivation of six (6) Diesel Engines. (Engines will be operated periodically as described in Phase IV specifications.)

1. Crankcase  
Take samples of lube oil from crankcase and give to the CMS Representative to have analyzed. If TBN is less than 10 or otherwise unserviceable, pump out and refill with new Mobilgard 450 from ship's tanks. Thoroughly circulate clean oil to insure all parts are flushed and coated. Run engine to insure circulation.
2. Fuel Oil Systems  
Secure fuel supply to engines. Insure that all supply valves are tightly closed.
3. Combustion Chambers and Valves  
After the engines have cooled to a cylinder head temperature of 160 degrees Fahrenheit or less, measured at the injector nozzle flange area surfaces of each cylinder, the combustion chambers and valves of the engines shall be preserved as follows:
  - a. After oil is qualified as greater than 10 TBN and serviceable, rotate engines with starter 15-20 revolutions with fuel rack in the No Fuel position.
  - b. Close cylinder test valves for long term lay-up.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 205      DIESEL ENGINES - EMERGENCY AND MAIN GENERATORS continued

4.      Cooling System
  - a.      The blocks and water jackets shall remain completely full of treated water. The drain cocks shall be closed. Owner furnished corrosion inhibitor is to be maintained at its recommended level.
  - b.      Reconnect the temporary Ship's Service Diesel Generator cooling system removed during activation. This system shall be reinstalled to permit operation of the generators during Phase IV maintenance using fresh shore water instead of sea water as the raw water in the heat exchangers.
  - c.      Reconnect the port and starboard main engine raw water cooling pump jumper removed during activation. This system shall be reinstalled to permit operation of the main engines during Phase IV maintenance using fresh shore water instead of sea water to the pumps.

ITEM 215      STEERING GEAR AND TELEMOTOR SYSTEM

1.      Clean all surfaces of power rams, telemotor rams, and all other ferrous machined surfaces and apply a protective coating.
2.      Pressure lubricate steering engine and all controls.
3.      Position and secure the rudder in the amidships position and reinstall owner supplied blocks between ram cylinders and ram crossheads to prevent rudder movement.
4.      Set all hydraulic valves to maintain a fully charged system. Fill pumps and storage tanks to full capacity.
5.      Clean all oil residue off deck and machinery.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 220      CENTRIFUGAL PUMPS - FRESH AND SALTWATER SERVICE

1. Completely drain and thoroughly dry the interiors of approximately 27 fresh and saltwater centrifugal pumps and strainers. A complete listing is given in reference. Accomplish all disassembly, disconnection's, and removals required for accomplishment of work. Reassemble all removals after acceptance of work except drain plugs, which shall be secured to parent units. Salt water pumps shall be flushed with fresh water. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed. This work shall be accomplished in conjunction with the requirements of Items 235 and 402.

DATA:                      Boiler Feed Pumps Two (2) each  
                                 Mfr.: John Bean Co.  
                                 Model: LOA-914 B-1 Horizontal Triplex Piston

                                 Evaporator Pumps One (1) each  
                                 Vacuum Pump:  
                                 Mfr.: Nash  
                                 Type: AT-34

                                 Condensate Pump  
                                 Mfr.: Worthington  
                                 Model: 3/4 DN-4

                                 Distiller Feed Pump:  
                                 Mfr.: Worthington Pump Company  
                                 Model: 20NF-52

                                 Distiller Pump:  
                                 Mfr.: Worthington Pump Company  
                                 Model: 3/4 DN-4

                                 Distiller Brine Pump:  
                                 Mfr.: Worthington  
                                 Model: 2 DNE-72

                                 Fire Pumps Two (2) each  
                                 Mfr.: Worthington Corporation  
                                 Model: 4-LV-10

                                 Bilge and Ballast Pumps Two (2) each  
                                 Mfr.: Worthington Corporation  
                                 Model: 3-RVS

                                 S.W. Booster Pump for 300 KW Diesel Engines Three (3) each  
                                 Mfr.: Worthington Corporation  
                                 Type: 3 MNE-52 Monobloc

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ITEM 220      CENTRIFUGAL PUMPS - FRESH AND SALTWATER SERVICE

Duplex Vacuum Priming Unit One (1) unit Consisting of Two (2) Vacuum Pumps

Mfr.: Nash Engineering Company

Model: MD 571

Fresh Water Pumps Two (2) each

Mfr.: Worthington Corporation

Model: 1-1/4 TH.-11

Gray Water Pumps Two (2) each

Mfr.: Chicago Pump Company

Model: VPMLMC-4

Hot Water Circulating Pump

Mfr.: Worthington Corporation

Model: 1-DNS-2 Monobloc

Stripping Pump and Tank: (In MSD Room)

Mfr.: Sarco

Hypochlorinator:

Mfr.: Wallace and Tierman

Model: A-429

Boiler Feed Booster Pumps

Mfr.: Carver Pump Company

Model: 1-1/4 SPL

Fire Bilge and Ballast Pump

Mfr.: Worthington Corporation

Model: 4-LV-10

Priming System for Fire, Bilge and Ballast Pump:

Mfr.: Nash Engineering Company

Model: MD 2 L

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ITEM 225      CARGO OIL PUMPS AND PIPING

1. Drain all cargo/ballast and bilge pipe systems, including pumps and strainers into respective tanks and pump room bilge. Load 250 tons of commercial fresh water into one cargo tank designated by CMS Representative and add rust inhibiting additives to be supplied by the owner.
2. Fill all cargo/ballast pipe, pump and bilge systems with the above treated commercial fresh water and allow to remain for a minimum of 24 hours. Discharge water overboard using ship's pumps as far as possible. Drain remaining water into tank bottoms, pumproom bilge and voids as appropriate.
3. Clean and dry bottoms of all unused cargo/ballast spaces, pump room bilge and void spaces. Open all valves in the entire system, with the exception of the dedicated ballast tanks, to allow for D/H circulation.

DATA:                      Cargo Pumps - Five Each  
                                 Mfr.: Worthington Corp.  
                                 I.D.: 6-L-11 (Centrifugal)  
                                 Capacity: 1,000 GPM

                                 Stripping Pumps - Five Each  
                                 Mfr.: Worthington Corp.  
                                 I.D.: 4 VEV (Rotary)  
                                 Capacity: 200 GPM

ITEM 230      FRESH WATER SYSTEMS

1. Drain the two (four on ALATNA) potable water tanks located at 2-88-1 and 2-88-2. Pump out any remaining water after draining and blow tanks dry. Open the manhole openings and reinstall expanded metal screens removed during activation.
2. Make temporary removals of piping sections, valves, fittings, and drain plugs necessary to drain all fresh water piping systems including hot water and pressure tanks. Blow down systems with heated compressed air to insure that pockets of water are removed. Reassemble piping as needed. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed. This work shall be accomplished in conjunction with the requirements of Item 220.

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ITEM 235      SALTWATER SYSTEMS

1. Completely drain, flush with fresh water, drain and dispose of all water in the saltwater systems throughout the ship. Blow down systems with clean dry air, making all necessary disassembles to insure that systems are dry. Disconnect saltwater service lines to stern tube seals port and starboard. Drain, flush with fresh water and completely dry out lines. This work shall be accomplished in conjunction with the requirements of Item 220 and 402.
2. At completion of draining and drying, all removals for this purpose shall be left open for circulation of D/H air. Secure removals adjacent to parent unit. Tag with service and location. Paint removals red for easy identification. Provide CMS Representative with type list of all removals left open. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed.
3. The ship's crew will remove weather deck fire hoses, nozzles, applicators, and spanners, complete and inventory of the equipment and stow it in locations designated by the Chief Officer. The crew's work will include draining and air drying of all fire hoses.
4. Fully flush the entire fire main and off-stickers with commercial fresh water from the lower engine room upwards. Open each weather deck hydrant to allow generous flushing at each station. Flush each under deck hydrant via hose to nearest toilet or overboard drain. Drain the entire system by opening all hydrants simultaneously. Close all hydrants and blow with Contractor supplied air each hydrant independently. Close and cap all weather deck hydrants. Internal hydrants will be later opened to accommodate Item 310, dehumidified air circulation.
5. Clean all strainers and close

ITEM 240      SANITARY, SOIL AND DRAIN PIPING SYSTEMS

1. Thoroughly flush all sanitary, soil and drain piping systems with superchlorinated fresh water. Disassemble as necessary to drain and dry out. Remove and reinstall ten designated sections of piping to prove systems dry to CMS Representative. Disassemble and remove internals from five check valves to facilitate circulation of D/H air. Store internals in cloth bags attached to parent component and tag with non-ferrous tags showing location from which removed and identification.
2. Blow dry all toilet and sink "P" traps with compressed air.
3. Reassemble items removed for drying systems except check valves and those valves and piping sections disassembled or removed to facilitate circulation of D/H air. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed.

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ITEM 245      MSD DEACTIVATION

1. Flush out with superchlorinated fresh water the entire MSD system including all piping, pumps, and both sections of the tank. Drain and dispose of all water in accordance with local port regulations. This work shall be accomplished in conjunction with the requirements of Item 240.
2. Remove the access opening end plates in the wet and media tanks and remove any remaining water. Access openings shall be left open and cover plates bolted to studs.
3. Open the two discharge pumps and fill pump casings with SAE 10 lube oil. Drain after all parts are coated.
4. Remove plugs from Roots blowers and fill with SAE 10 lube oil. Drain oil after parts are coated. Place plugs in cloth bags and attach to blowers. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed.

ITEM 250      OPEN ITEM

ITEM 255      AIR COMPRESSORS AND PIPING SYSTEMS

1. Drain and refill the crankcases of two diesel engine starting-air compressors, one ship's service air compressor, and one control air compressor. Run compressor. Circulate the lube oil system of each compressor.
2. Open, thoroughly clean and dry, and close up in good order all compressed air receivers. Open, drain, blow dry and close up in good order all compressed air piping, fittings, valves dryers and filters.
3. Rotate each unit a minimum of 10 revolutions to assure coverage to all parts with clean oil.
4. After inspection by the CMS Representative, close up the system in good order with new gaskets as required.

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ITEM 260     BOILER

Accomplish the following to the two Va Power boilers:

1.     a.     Flush with fresh water the water sides of the boiler including feed pumps and piping. Drain upon completion. Blow dry with compressed air.
- b.     Remove valves and fittings sufficient to completely drain the system and allow circulation. Close up after 3 months D/H. Pressure test with air to insure complete closure.
- c.     Open firesides. Air lance and vacuum clean soot from all boiler coils.
- d.     Remove feed water treatment and test chemicals. Turn over chemicals to local Drew agent. Empty and clean all bottles and cabinet.

ITEM 262     OPEN ITEM

ITEM 263     EVAPORATOR

DATA:     Offshore Marine Laboratories Inc.  
             Irvine, California  
             Model: Sea Quencher - B183046-30  
             Serial No. 13068-0989  
             Rated: 1,800 gpm, Location: 2-49-1

1.     Completely drain and clean the evaporator and associated heat exchangers, control valves and piping, opening only the minimum number of access covers and flanges required to accomplish this work.
2.     Refill and flush with freshwater
3.     Thoroughly drain and dry the evaporator internals, heat exchangers, control valves and piping.
4.     Close up all fittings and removals after three (3) months of dehumidification. Pressure test with air to insure system is completely closed and tight.



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ITEM 265      STEAM HEATING AND CONDENSATE PIPING SYSTEMS

1. Disconnect and make all removals required to completely drain and dry all steam and condensate systems throughout the ship including 23 re-heaters, 3 pre-heaters, 5 engine room heaters, galley and pantry systems, 22 room convection heaters, the boiler feed tank, the purifier heaters, and the heating system drain coolers. Descriptions and locations are listed in the reference.
2. All drains, tanks, traps, condensers, steam supply valve bonnets associated with the systems shall be removed from the inlet and outlet sides of heaters and left open. Traps, plugs, and valve bonnets to be left open shall be wired to parent equipment and plainly marked with red paint.
3. Blow down all piping with dry air and prove clean and dry. Drain tank shall be wiped dry. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed.
4. Provide a typed list of all removals by service and location.

The following is a list of heaters to be dealt with:

a.      Re-heaters:

Location/System	
1-121-2	01-94-2
1-129-2	01-96-1
1-134-1	01-108-1
1-121-1	01-108-2
1-112-1	01-117-1
1-114-2	01-117-2
1-107-2	02-98-2
1-101-2	02-98-1
1-95-1	02-112-2
1-95-2	02-110-1
1-89-2	02-120-2
1-15-2	

b.      Pre-heaters:

02-122-2  
02-122-1  
1-103-2

c.      Engine Room:

L.O. Purifier Heater  
F.O. Purifier Heater  
Whistle  
Space Heaters (4 each)  
Condensate Cooler (5 each traps)

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 265      STEAM HEATING AND CONDENSATE PIPING SYSTEMS continued

d.      Galley and Pantry:

Hot water heater	1-118-1
Dish washer	1-118-0
Steam table	1-115-1
Steam kettles	1-111-1
Steam table	01-114-1

e.      Convection Heaters:

3-87-0	Pump Room
1-135-4	Steering Gear
1-127-1	T & S
1-120-3	T & S
1-110-3	T & S
1-104-3	T & S
1-95-3	T & S
1-94-4	T & S
1-110-6	T & S
1-110-2	T & S
1-97-2	T & S
01-91-4	T & S
1-91-1	T & S
1-97-1	T & S
1-107-1	T & S
4-20-0	Pump Room (4 each)
2-20-0	Pump Room
2-13-0	
2-87-0	

f.      Miscellaneous Tanks and Heat Exchangers

- (1)      Boiler Feed Tank
- (2)      Purifier Heaters
- (3)      Heating System Drain Cooler

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 267      FUEL AND LUBE OIL TANKS

1. Top up the diesel oil service tank, the day tanks, the boiler and generator service tanks with ship's diesel oil. Treat the subject tanks per manufacturer's recommendations with owner's supplied Drew Chemical Corp. fuel micro-biocide.
2. With the exception of the service and day tanks, all remaining fuel, if the fuel tanks are not topped-off prior to deactivation, shall be transferred to as few tanks as possible, preferably, to the forward double bottom tanks (FR. 91-103) following to the forward wing tanks (FR. 91-103). Tanks should be filled not more than 90% to allow for expansion and to equal innage to reduce list. Per Item 267 (1) above, treat subject tanks as required with owner's supplied Drew Chemical Corp. fuel micro-biocide. The fuel transfer should be completed by the ship's crew.

DATA:

- D.O. Wing Tank Port, FR. 91-103, Capacity 770 BBLS.
- D.O. Wing Tank Stbd., FR. 91-103, Capacity 770 BBLS.
- D.O. Double Bottom Port, FR. 91-103, Capacity 307 BBLS.
- D.O. Double Bottom Stbd., FR. 91-103, Capacity 307 BBLS.
- D.O. No. 3 Double Bottom Port, FR. 103-120, Capacity 316 BBLS.
- D.O. No. 3 Double Bottom Stbd., FR. 103-120, Capacity 328 BBLS.
- D.O. Wing Tank Port, FR. 103-120, Capacity 649 BBLS.
- D.O. Wing Tank Stbd., FR. 103-120, Capacity 580 BBLS.
- D.O. Service Center, FR. 120-124, Capacity 64 BBLS.
- D.O. Day Tank Port, FR. 120-124, Capacity 27 BBLS.
- D.O. Day Tank Stbd., FR. 118-124, Capacity 27 BBLS.
- Boiler D.O. Service, FR. 118-120, Capacity 6 BBLS.
- Engine D.O. Service, FR. 117-120, Capacity 10 BBLS.

ITEM 270      LUBE OIL PURIFIERS

1. Disassemble, thoroughly clean, and dry DeLaval Model 55-N-03 lube oil purifier.
2. Coat internals with Contractor supplied light oil and close up for operational readiness following the CMS Representative's inspection.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 280      OIL AND WATER SEPARATOR

1.      Clean and dry out the oil and water separator and the associated pump and oil monitor.
2.      Open both chambers and remove the filter cartridge. Close up cage. Circulate clean fresh water and detergent through the separator to flush system of oil. Clean slop tank after flushing.
3.      Remove drain plugs and sections of piping to facilitate draining and drying system.
4.      Replace filter cartridge with new. Both chambers and oil pump covers shall be left open for air circulation. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed. Lubricate pump impellers with petroleum jelly prior to closure.

ITEM 282      OILY BALLAST MONITOR

1.      Disconnect lines as required to flush clean with freshwater and detergent. Flush again with freshwater, blow dry with air, and reconnect all lines. Leave system operational.

ITEM 285      OPEN ITEM

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 290      SHIP'S REFRIGERATION AND AIR CONDITIONING

1. Top off the charge of the refrigeration and air conditioning systems with refrigerant to system capacity. Secure all valves and conduct leak detection test to insure that systems are leak free. Pump refrigerant York systems to on board storage receivers.
2. Flush condensers and piping with fresh water. Open, clean tubes, and drain. Dry out condensers, supply and return piping. Removals required to accomplish this work shall be secured to parent units with wire and tagged with non-ferrous metal tags showing function and location of removal. Close up all fittings and removals after 3 month's D/H. Pressure test with air to insure system is completely closed. The work required by this item shall be accomplished in conjunction with the requirements of Items 220 and 235.
3. Fill compressor with sufficient oil to raise the level above crankshaft oil seals. Hang signs on compressors that read "CRANKCASE OIL OVER FULL - DO NOT OPERATE UNTIL CORRECT OIL LEVEL IS ESTABLISHED" in 2.5cm high red letters on a white back ground.
4. Fully hand-wash the entire interior surfaces, doors and entry areas of all walk-in refrigeration boxes with industrial grade disinfectant. Dry out and secure doors in open position. Wedge wooden blocks under doors to remove weight from the hinges. Stand all metal gratings on edge and lash to prevent falling.
5. Thoroughly clean all ship's refrigerators - leave in clean dry condition. Lash open for air circulation.

DATA:                      Ships Service Refrigeration Systems - Two Systems  
                                 Mfr.: York Corp.  
                                 Mfr. I.D.: AF-23-9DE  
                                 Type: A/W

                                 Air Conditioning Units - Five Each  
                                 Mfr.: WEDJ Inc.  
                                 Model: WMAC 7 1/2 Marine Air Conditioner

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## ITEM 292      GAUGES

1. Disconnect all salt water gauge lines located in machinery spaces and throughout ship. Rinse gauges with fresh water. Provide a reference list of gauges and pertinent information.
2. Blow out gauge lines to remove all traces of liquid then reconnect.
3. In addition to the gauges listed in the reference, deactivate as above approximately 20 miscellaneous gauges located in pump rooms, on weather decks and in midship and aft house areas.

### DATA:

<u>SERVICE</u>	<u>DIAL SIZE</u>	<u>RANGE IN POUNDS</u>	<u>NUMBER INSTALLED</u>
300 kW Boost. P. #1 Suction.	4 1/2	15-0-120	2
300 kW Boost. P. #2 Suction.			
300 kW Boost. P. #3 Suction.	4 1/2	30-0-30	1
MN. Eng. #1 S.W.P. Suction.			1
MN. Eng. #2 S.W.P. Suction.			1
Cargo Pump #1 Suction.			1
Cargo Pump #2 Suction.			1
Cargo Pump #3 Suction.			1
Cargo Pump #4 Suction.			1
Cargo Pump #5 Suction.			1
Strip. Pump #1 Suction.			1
Strip. Pump #2 Suction.			1
Strip. Pump #3 Suction.			1
Strip. Pump #4 Suction.			1
Strip. Pump #5 Suction.			1
Fire Pump Suction. (Motor Rm.)			1
Distill. Feed Pump Disch.	4 1/2	0-15	2
Distill. Feed Pump Suction.	4-1/2	0-15	2
Brine Pump Disch.	4 1/2	0-50	2
300 kW Boost. P. #1 Disch.	4 1/2	0-60	1
300 kW Boost. P. #2 Disch.			1
300 kW Boost. P. #3 Disch.			1
300 kW #1 S.W.P. Disch.			1
300 kW #2 S.W.P. Disch.			1
300 kW #3 S.W.P. Disch.			1
MN. Eng. #1 F.W. Clr. S.W. Out.			1
MN. Eng. #2 F.W. Clr. S.W. Out.			1
MN. Eng. Stby. S.W. Serv. Out.			1
Aux. S.W. Serv.			1
Stern Tube S.W. Serv.			2
Bilge, Ball. Trans. P. Suction.			1
Bilge & Ballast P. Disch.			1
Sewage Pump #1 Disch.			1
Sewage Pump #2 Disch.			1

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 292      GAUGES continued

MN. Eng. L.O. Clr. Inlet	4 1/2	0-100	2
MN. Eng. L.O. Clr. Out			2
Sanitary S.W. Service			1
Evap. Feed Pump Disch.			2
Cargo Pump #1 Disch.			1
Cargo Pump #2 Disch.			1
Cargo Pump #3 Disch.			1
Cargo Pump #4 Disch.			1
Cargo Pump #5 Disch.			1
Strip. Pump #1 Disch.			1
Strip. Pump #2 Disch.			1
Strip. Pump #3 Disch.			1
Strip. Pump #4 Disch.			1
Strip. Pump #5 Disch.			1
Fire, Bilge & Ball. P. Disch.			1
Fire Pump Disch. (Motor Rm.)			1
Fire Main (Motor Rm.)			1
Fire Pump Disch. (Eng. Rm.)			1
Fire Main (Eng. Rm.)			1
Prop. Eng. #1 S.W.			1
Prop. Eng. #2 S.W.			1
Vacuum Pump Suction.	1/2	0-30	3
Vacuum Tank			1
Evaporator Shell	30"	0-30#	1
Sea Feed Pump Discharge		0-60#	1

300

ELECTRICAL

ITEM 305     CATHODIC PROTECTION SYSTEM

REF.: T-AOG 81-302-4839531 Rev. A, "Dehumidification Electrical Power and Control System."

DATA:        CAPAC Cathodic Protection System  
Engelhard Systems  
Union, New Jersey 07083

1. Government Furnished Material (GFM)
  - a. Electrocatalytic Controller unit.
  - b. Anode Assembly, platinized niobium, suspended type with 50 feet of cable. Engelhard, Part No. 56800, eight (8) each.
  - c. Silver/Silver Chloride Reference Electrode with 50 feet of cable. Engelhard, Part No. 36919, one each.
  - d. Cable, Ship 60, for Bus Ring, 900 feet.
  - e. Cable, Ship 23, 350 feet.
  - f. Transformer, one (1) each.
2. Contractor Furnished Material  
Contractor shall furnish material necessary to make the installation complete and operational. Material, generally, will consist of, but not be limited to the following:
  - a. Scotch #33 Electrical Tape
  - b. Scotch 3-M Scotch Fill, 1 1/2 x 60"
  - c. Heat-Shrink Tubing
  - d. Heat Shrink End Caps
  - e. Solder
  - f. Cable Straps (Nylon)
  - g. Cable Connections
3. Using owner's supplied, onboard the ship sketches for guidance, reinstall the Cathodic Protection System removed during the activation of the ship.
4. Scope  
Contractor shall provide labor, material (except GFM), and equipment to install a complete Cathodic Protection System consisting of four (4) major components:
  - a. Anode Assembly
  - b. Automatic Controller/Power Supply
  - c. Silver/Silver Chloride Reference Electrode
  - d. Bus Ring (Ship 60) Cable



M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 305      CATHODIC PROTECTION SYSTEM continued

5.      Mechanical Installation

a.      Install a Bus Ring using GFM Ship 60 cable in one continuous loop from bow to stern port and starboard sides securing the cable to ship's structure using Contractor furnished cable straps.

6.      Electrical Installation

a.      Using reference (a) for guidance, reconnect a GFM transformer to the 3 pole, 440 VAC, 10 Amp circuit breaker. Reconnect the GFM Automatic Controller/Power Supply to the transformer.

b.      Connect the Bus ring (Ship 60) cable to the Automatic Controller/Power Supply. Connect the ground lead from the Automatic Controller/Power Supply to ship's hull. Ground lead shall be mechanical connected by lugs and then soldered/welded for electrical connection.

c.      Connect the eight (8) each Anode Assemblies to the Bus Ring and properly insulate with electrical tape and heat shrink tubing for a watertight connection. The length of each Anode cable shall be adjusted so the Anode will be positioned at the turn of ship's hull approximately 2 to 3 feet above the keel.

d.      Install Contractor furnished watertight 30 Amp fuse boxes on each of the Anode cables so the fuse will be between the Anode and the Bus Ring.

e.      Anodes shall be evenly spaced about the hull with four (4) on the port side and four (4) on the starboard side, at the following approximate locations, Use and install a total of eight each, owner supplied hand rail suspension brackets to support anodes and wires. Support the weight of each Anode Assembly by a 1/2 inch Nylon Line supplied by the owner. Weight shall not be supported by the cable.

01-15-1	01-15-2
1-60-1	1-60-2
01-88-1	01-88-2
01-135-1	01-135-2

g.      Install one GFM Silver/Silver Chloride Reference Electrode. Position the reference Electrode to maintain a maximum distance from the nearest Anode. Connect the Reference Electrode to the Automatic Controller/Power Supply using GFM Shop 23 cable. The weight of Reference Electrode shall be supported by 1/2" nylon line. The reference electrode shall be positioned on the port side at 1-85-2 supported per Item 305.6 (e) above.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 310      DEHUMIDIFICATION SYSTEM

REF.:      (a)    T-AOG 81-514-4839532 Dehumidification Air Distribution Diagram  
              (b)    T-AOG 81-302-4839531 Dehumidification Electrical Power and Control System

1.      Dehumidification System

DATA:      Mfg.: CARGOCAIRE  
              Model: HC-500  
              Volts: 440 VAC  
              Location: Permanently mounted, 1-18-1 Fore Peak Space  
              Condensate drain: Bulkhead penetration to main deck

MFG.: EBAC Systems Inc., Williamsburg, Virginia  
Model: CD-425  
Volts: 460 VAC  
Location: Temporarily mounted, 2-87-2, Aft Pumproom  
Condensate drain: Bulkhead penetration at pumproom WTD.

MFG.: EBAC Systems Inc., Williamsburg, Virginia  
Model: CD-100  
Volts: 110 VAC  
Location: Temporarily mounted, 2-118-1, Engineroom  
Condensate drain: Buckets

a.      Reinstall equipment removed during ship activation. The units are equipped with drain hoses, circuit breakers, humidistats, thermostats, transformers, and electrical cable. Installation includes from owner's supply flexible plastic and aluminum duct piping, and plastic drain hoses and fittings. Connect each unit to its electrical source. Accomplish reinstallation of all piping, valves, traps, manhole covers, access covers, and vent duct sections for circulation of D/H air, those items are tagged or painted red for easy identification. Open a total of 32 interior doors and hatches per the CMS Representative. Open 8 each bulkhead penetrations per the following list:

- a.      1 each, 6" bolted flange at 1-20-2 (Main Deck)
- b.      1 each, 8" bolted flange at 1-20-2 (Main Deck)
- c.      1 each, 8" welded flange at 1-24-1 (Ice Tunnel)
- d.      1 each, 8" welded flange at 1-25-2 (Ice Tunnel)
- e.      1 each, 8" bolted lighting flange at 1-86-1 (Ice Tunnel)
- f.      1 each, 6" bolted flange to fire main at 1-18-1 (Ice Tunnel)
- g.      1 each, 6" welded flange at 02-114-2 (Emergency Generator Room)
- h.      1 each, 15" bolted square flange to 02-114-1 (Gyro Room)

2.      Remove three fire screen doors at 1-102-2, 01-100-2, and 01-100-1. Remove from hinges and wire to nearby handrail. See Item 445 for manhole and other closure requirements.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 310      DEHUMIDIFICATION SYSTEM contined

3. Flexible Hoses & Cargo/Ballast Tank Valves:
  - a. Connect 4 each owner's supplied flexible hoses to ship's fire main hydrants and cargo/ballast tank vent header. Seal connections with Contractor supplied waterproof sealant. Seal cargo/ballast tank vent screens with Contractor supplied duck-tape and sealant (total 16 locations). Open appropriate fire hydrants and cargo/ballast tank vent valves to allow passage of dehumidified air from ship's fire main to all cargo/ballast tanks.

**CAUTION:** Do not open tank main suction, stripping valves and suction double-block valves to tanks holding ballast water. Please review valve setting requirements with the CMS Representative before commencing the following works.

- b. Open all cargo/ballast tank main suction, stripping and suction double-block valves between Frames 27 and 87 to allow passage and circulation of dehumidified air.
  - c. Open cargo and stripping pump strainers (total 6 each) in aft pumproom at Frame 87. Open all suction valves for each cargo system to each pump (total 12 valves) to allow passage and circulation of dehumidified air through the open pump strainers into the pumproom space.
3. Testing:
  - a. After installation and the zone testing above is completed satisfactorily, activate the D/H and test for proper operation. NOTE: After testing float switches by tripping insure that alarm indicator panel switches are reset.

ITEM 315      FLOODING ALARMS

1. Reinstall and connect the owner's supplied float switches and cable leads for bilge alarms removed during activation in the following locations:
  - a. Motor/Pumproom bilge (5-24-1)
  - b. Forward Pumproom bilge (5-26-2)
  - c. Aft Pumproom bilge (4-87-0)
  - d. Aux. Machinery Room bilge (5-89-0)
  - e. Engine Room bilge (5-118-1)
2. Connect wire leads to Flying Bridge mounted visual and audio alarms. Seal connections with Contractor supplied sealant.
3. Test flooding alarms by tripping. Insure that visual and audio alarms function.

**NOTE:** After testing float switches by tripping, insure that alarm indicator panel switches are reset.

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ITEM 322      CARGO, DEBARKATION, SIGNAL AND SEARCH LIGHTS

1. Disconnect and remove two 18-inch searchlights, one signal light, and eight cargo and debarkation lights from foremasts, weather decks and superstructure. Tag each light with heavy, weather-proof tag identifying its location. Stow in accessible location on vessel per the Chief Officer or CMS Representative.
2. All cables, deck penetrations and cable stuffing tubes shall be made watertight. Exposed cable wire shall be encapsulated in heat shrinkable tubing. Close and seal in Contractor supplied sealant all weather deck exposed electric connection jacks and boxes.
3. Restore all disturbed coatings per paint specifications with owner's supplied paint.

ITEM 330      INSULATION (MEGGER) READINGS

1. Megger Readings
  - a. Obtain and record megger readings for every power and lighting circuit throughout the ship as follows:
2. Power Circuits:
  - a. Measure insulation resistance of each power circuit, motor and generator, controller, and its associated electrical circuit components blocked in a single circuit. Isolate circuits or components with megger readings of less than 1 kilo-ohm per volt of voltage system and determine their precise locations. Furnish the CMS Representative with location of each low reading.
3. Provide a typed report of all readings to CMS Representative.

WARNING: DO NOT megger the Central Control Console, the Bridge Control Console, the Remote Control Panel for diesel generators, nor any other item having solid state components.

ITEM 335      SWITCHBOARDS, CLEANING OF

1. Clean bus bars, circuit breakers, relays, meters, voltage regulators and rheostats of main switchboard and emergency switchboard with a non-residue type spray cleaner. Remove all dirt and debris without disassembling component parts of switchboards.
2. All switches and circuit breakers shall be left in the open position after cleaning except lighting switches designated by CMS Representative.
3. Tighten to appropriate torque levels all electric cable lugs inside the main and emergency switchboards.

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ITEM 340      WEATHER EXPOSED LIGHTING FIXTURES, RECEPTACLES AND CABLE STUFFING TUBES

1. Check all weather exposed lighting fixtures, receptacles and cable stuffing tubes. Insure water tightness. Use GE Silicone Rubber RTD 102 Sealant or equivalent.
2. Replace missing, damaged or broken receptacle outlet caps, vapor proof globes and wire guards furnished by owner.

ITEM 347      ENGINEERING PLANT CONTROL SYSTEMS

1. Provide heavy plastic covers over the Central Control Console, the Bridge Control Console, and the Generator Remote Control Panel.

ITEM 357      VOICE TUBES

1. Weatherize the two voice tubes from flying bridge to pilot house by sealing with Contractor supplied sealant on flying bridge side only.

ITEM 360      GALLEY EQUIPMENT

1. Clean and remove all grease, dirt and debris from top and bottom of heating units, voids under heating units, interior and exterior of ovens, oven control panels and overhead range control panels.
2. Thoroughly clean galley counters, sinks, refrigerators, bulkheads, appliances and deck with a Contractor supplied industrial grade disinfectant.
3. Thoroughly clean Gaylord fan units (see item 477).
4. Place Contractor supplied roach insecticide as appropriate.

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ITEM 370      BATTERIES

1. Disconnect all lead acid batteries. Clean all battery connections on ship and coat with petroleum jelly. Clean battery racks and shelves. Sweep battery rooms clean. Top off all cells with distilled water.
2. Place batteries on a trickle charge system to insure that batteries are ready for use.
3. The following batteries are included:
  - a. Four (4) each, 6 volt, 200 AH starting batteries for Emergency. Diesel Gen., 02-112-0;
  - b. Eight (8) each, 6 volt, 100 AH, for Gen. Alarm and Internal Communications, 02-104-2;
  - c. Two (2) each, 6 volt, 500 AH, emergency radio, 02-104-2;
  - d. One (1) each, 12 volt, 4 SAW, Gel-cell, inside data logger in AMR;
  - e. Five (5) each, 6 volt, 8 AH power sonic model PS682, fire detection system.

ITEM 385      NAVIGATION EQUIPMENT

1. Provide from ship's supply heavy duty plastic covers for ship's radar indicator and transceiver units, wheel house telegraph and control console.
2. Provide from Contractor supply heavy duty herculite covers and install on the magnetic compass and stand on the flying bridge, and the gyro repeaters on the port and starboard bridge wings, flying bridge and after steering station.
3. Install from ship's supply heavy duty, weather-proof covers for the port and starboard bridge wing engine order and rudder angle indicators.
4. Insure that all individual unit and switchboard switches are off to insure against accidental operation.

ITEM 387      WIND INDICATORS

1. Remove the two Bendix Wind Speed Transmitters located on port and starboard yardarms, 05-91-1 and 05-91-2, place in a safe location in the wheelhouse.
2. Restore all disturbed coatings per paint specifications with owner's supplied

paint.

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400

HULL

## ITEM 402

HULL BLANKS

1. Furnish services of divers to reinstall all hull and sea chest blanks removed per the following list. In addition, reinstall 18 plumbing vents located on port and starboard sides one foot below main deck in-way of accommodation block. Utilize blanks and gaskets previously removed during activation. Supply and fabricate gaskets as required. Plumbing vents are fitted with 1/2" NPT stainless-steel pipe plugs.

Item No.	Name	Size of Hull Opening	P/S	Frame	Height Above Keel
1	Overboard Discharge	12"	P	117	4'-6"
2	Bilge and Ballast Pump Suction Seachest	2'-0" x 4'-0"	S	117	3'-9"
3	Boiler Blow Down	4"	P	113	7'-0"
4	Miscellaneous Saltwater Overboard Discharge	4"	S	113	7'-0"
5	Fire Pump Suction Seachest	2'-0" x 3'-0"	P	107	3'-8"
6	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 6"	P	103	9'-0"
7	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 6"	S	103	9'-0"
8	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 4'-0"	P	103	7'-6"
9	Main Engine and Auxiliary Generator Cooling System Seachest	2'-0" x 4'-0"	S	103	7'-6"
10	Fire Main and Distilling Plant Suction Seachest	2'-0" x 4'-0"	S	102	8'-0"
11	Overboard Discharge	4"	P	100	11'-1"
12	Cargo Pump Suction Seachest	2'-0" x 3'-0"	P	90	1/2"
13	Cargo Pump Suction Seachest	2'-0" x 3'-0"	S	90	1/2"
14	Overboard Discharge	6"	P	88	2'-6"
15	Overboard Discharge	6"	S	88	2'-6"
16	Overboard Discharge	6"	P	25	5'-0"
17	Cargo Bilge and Ballast Suction Seachest	2'-0" x 3'-0"	P	25	2'-5"
18	Bilge and Ballast Suction Seachest	2'-0" x 2'-6"	S	22	2'-9"
19	Overboard Discharge	4"	S	21	5'-0"

2. For ease of future removal, all nuts and bolts shall be lubricated with Contractor supplied anti-seize compound before installation.
3. The hull blanks shall be in place and secure before the work required in Items 220 and 235 is accomplished. In conjunction with the work required for those items, flush with freshwater, drain, and pump dry all seachests and sea connections, removing and replacing the bonnets on sea valves as necessary. Close up and test the integrity of all systems per Item 335.

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ITEM 405      LIFEBOATS, DAVITS AND WINCHES

1. Gravity Davits:
  - a. Grease with heavy duty, water-resistant, rust preventative grease all wires, blocks, sheaves, releasing gear, rollers and fittings.
2. Lifeboats:
  - a. Drain and dispose of the water, lube oil and fuel oil from the engines and fuel tanks. Refill engines with new Mobil 1, (5-30W) lube oil, anti-freeze treated coolant, and marine gas oil from ship's supply. Turn engines at least 15 times to insure the complete coating of interior surfaces. Flush water sides with fresh water.
  - b. The ship's crew will remove all supplies and equipment from both lifeboats, complete an inventory and store onboard the vessel.
  - c. Clean boat interiors and exteriors using detergent. Remove rubber balls from automatic drain plugs, place in cloth bags, and fasten to strainer and store in such a way as to prevent inadvertent plugging.
  - d. Cover the boats using the owner's supplied covers and wooden frame supports.

ITEM 408      RING LIFE BUOYS

1. The ship's crew will remove twelve (12) ring life buoys from weather deck locations, remove all water-light batteries and discard or scrap. Stow ring buoys and water-lights in an area to be designated by the Chief Officer or CMS Representative. No Contractor assistance is required for this item.

ITEM 410      INFLATABLE LIFE RAFTS

1. The ship's crew will remove the hydro-static releases from the two Sea Jay Elliott 25-person inflatable life rafts and secure them in the Chief Officer's stateroom. The Contractor will cover the rafts with a heavy duty, weather-proof material securely lashed to the rafts and frames.



M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 415     FIRE FIGHTING AND CO<sub>2</sub> SYSTEMS

Fixed CO<sub>2</sub> Systems

1.     Disconnect all cylinder connecting hoses to all CO<sub>2</sub> fixed system bottles. Install locking pins in all operating levers. Sizes and locations are as follows:
  - a.                    36 each 75 pound bottles, 2-20-0
  - b.                    5 each 50 pound bottles, 3-25-0
  - c.                    5 each 50 pound bottles, 3-87-0
  - d.                    2 each 100 pound bottles, engine room
  - e.                    2 each 75 pound bottles, emergency generator room.
2.     Apply preservative grease to all internal and external actuating mechanisms and verify free operation.

Portable CO<sub>2</sub> Systems

1.     The ship's crew will secure all extinguishers in their designated positions and report defects, to the CMS Representative.

ITEM 433:     WEATHER DECK SCUPPERS AND DRAINS

1.     Tack-weld six each port and six each starboard, 10 inch x 4"x 1/4" Contractor supplied mild steel scupper and drain extensions in locations specified by the CMS Representative. Coat new steel and restore coatings per paint specifications with owner's supplied paint.

NOTE:            This item requires no Contractor participation.

ITEM 435     HOSE GEAR

1.     Install 1 in. x 1 in. x 12 in. wood spacers in boom rest cradles. Stow booms in cradles.
2.     Lubricate all wire runners, topping lift wire, vang guys, blocks, sheaves, shackles, goose necks, and fittings with water-resistant rust preventive grease. Pressure lubricate grease fittings in goose necks, winches, blocks and fittings. Coil wire on drums and coat with heavy top coating of preservative grease. Cover wires with heavy duty, weather-proof covers from Contractor supply.
3.     Remove all blocks, vangs and guys. Mark each item and store in forward stores per Chief Mate or CMS Representative.
4.     Restore all disturbed coatings per specifications with owner's supplied paint.

M/V ALATNA OR M/V CHATTAHOOCHEE - PHASE V, DEACTIVATION

ITEM 445      WATERTIGHT AND WEATHER-TIGHT CLOSURES

1. Chalk test rubber gaskets on weather deck doors, hatches and scuttle closures. Free-up all door dogs and mechanical closing devices. Grease all dogs. Dog all doors, hatches, and airports with the exception of five (5) access doors to be designated by CMS Representative. These doors to be painted yellow and marked "DEHUMIDIFICATION ZONE ACCESS DOOR" in two (2) inch black letters. All portholes to be dogged closed.

2. List of doors, hatches and airports to be dealt with:

a. Watertight Doors 26" x 72"

Battery Locker	02-102-2
Chart Room	02-100-1
Gyro Room	02-112-1
Emergency Gen. Room	02-114-1
Fan Room	02-120-1
Fan Room	02-120-2
Stack Door	03-108-1
Passage Way	01-91-0
Passage Way	01-105-1&2
Cleaning Gear Locker	01-104-1&2
Passage Way	02-124-1
Passage Way	01-84-1
Passage Way	01-84-2
Passage Way	01-58-1
Passage Way	01-58-2
Passage Way	01-24-1
Passage Way	01-24-2
CO <sub>2</sub> Room	01-23-1
Fwd Pump Room	01-25-2
Aft Pump Room	01-85-1
Fan Room	01-20-0

b. Hatches

01-5-1	24" x 24"
01-23-1	36" x 36"
01-111-2	25" diameter
01-25-2	36" x 36"
01-88-1	36" x 36"
01-131-1	35" x 35"
01-145-1	15" x 35"
03-140-0	15" x 26" Stack
03-140-1	15" x 26" Stack

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ITEM 445      WATERTIGHT AND WEATHER-TIGHT CLOSURES continued

c.      Airports

Location	Quantity
1-44-1	One
1-51-2	One
1-64-2	One
1-70-1	One
1-75-2	One
1-91-3	Two
1-91-1	One
1-91-4	Two
1-99-1	One
1-105-3	One
1-110-1	One
1-115-1	One
1-120-1	One
1-126-1	One
1-126-2	One
1-120-2	Three
1-110-2	Two
1-105-6	One
1-99-2	One
01-91-2	Two
01-91-0	One
01-91-1	One
01-97-2	One
01-97-1	One
01-106-1	One
01-106-2	One
01-114-1	One
01-114-2	One
01-115-0	Five
02-97-4	One
02-102-1	One
02-102-2	One
02-101-1	One
02-96-1	One

d.      Pilot House Windows

These windows are approximately 32" x 32" made by Kearfott Company. Nine (9) windows to be dealt with.

5.      Open manhole covers designated in the following list. Wire together all nuts and gaskets for each manhole, tag and store adjacent to each manhole. Lightly grease all exposed flanges and studs with Contractor supplied grease. Cover deck manholes with expanded metal covers from ship's supply. Manholes are located as follows:

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ITEM 445      WATERTIGHT AND WEATHER-TIGHT CLOSURES continued

<u>Each</u>	<u>Compartment</u>	<u>Each</u>	<u>Compartment</u>
1	2-8-0		
1	3-13-1	1	3-13-2
1	3-19-0		
1	4-24-1	1	4-26-2
(ALAT) 3	4-89-1	(ALAT) 3	4-89-2
(CHAT) 2	4-89-1	(CHAT) 2	4-89-2
1	2-120-1	1	2-120-2
1	2-131-2	1	1-128-0
1	2-142-1	1	2-142-2

NOTE: Engine and Control Room tank tops and manholes are not included in the list above.  
 The distribution of fuel, lube, hydraulic oil and slops at the time of deactivation will determine the number of manholes to be opened. It is estimated that 6 each will require opening as directed by the CMS representative.

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ITEM 447      VENTILATION TERMINALS

1. Chalk test rubber gaskets on weather deck ventilation closures. Replace defective gaskets with Contractor supplied material and labor. Estimate six (6) each requiring replacement.

Location	Approximate Size
1-20-0	8 x 8 inches
1-27-1	6 x 8 inches
1-20-2	14 x 20 inches
1-20-1	2 x 2 feet two (20) each
01-24-1	12 inch round
01-87-1	15 x 18 inches
01-86-1	12 x 15 inches
01-85-1	12 x 15 inches
01-85-2	8 x 15 inches
01-90-1	12 x 18 inches
1-141-1	24 x 18 inches
1-141-2	12 x 18 inches
02-114-2	36 x 24 inches
03-110-1	14 x 14 inches two (2) each
03-120-1	14 x 14 inches two (2) each

2. Install the following dogged flange covers dogged closures in following locations:

Location	Approximate Size
03-104-2	36 x 24 inches
03-102-1	42 x 72 inches
03-102-2	36 x 24 inches
03-107-1&2	24 x 72 inches
03-117-1	42 x 42 inches two (2) each
03-111-2	42 x 42 inches two (2) each

3. Deactivate the ship's whistle. Seal with Contractor supplied cover and sealant.
4. Clean interior surfaces of exhaust system 02-120-3 which serves the galley area. Clean free of all grease, dirt, lint, scale, rust, and other foreign matter from the Gaylord Hoods to weather deck terminus. Interior surfaces to be cleaned include Gaylord Hoods, ducts, trunks, screens, terminals and fan casing. Additional clean out openings may be cut into ducts to facilitate work.

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ITEM 455      CONTAMINATED LIQUID REMOVAL

1. Provide pumps, equipment, hoses and transportation to dispose of oily or otherwise contaminated liquids from Ship's bilge, cofferdams, voids, tanks, piping and vents necessary for accomplishment of work in items of this specification. A total of 40 barrels of salt water with 9% by volume marine Gasoil and 40W lube oil shall be used for estimating purposes.
2. Furnish price per barrel for additional removal and disposal of the same per Item 455 (1) above.

ITEM 470      BILGES AND DRAIN WELL CLEANING

1. Thoroughly clean all bilge and drain wells of extraneous matter and wipe down free of all oil, grease and other flammable materials. Clean rose boxes, clean strainer plates and reattach. Wash all surfaces including bilges and piping using fresh water and detergent except electrical and other items and areas that may be damaged by water. Dispose of per Item 455 above.
2. Upon completion, all spaces, bilges, drain wells, and rose boxes shall be completely dry and free to extraneous matter.

Locations:              Forward Pump Motor Room, 4-20-1  
                             Forward Pump Room, 4-23-0  
                             Aft Pump Room, 3-87-0  
                             Aux. Machinery Room, 4-91-0  
                             Engine Room, 4-103-0  
                             Drain Wells, 2-120-0

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ITEM 481      BALLAST

1. The Contractor shall supply 1,000 metric tons of "commercial" grade freshwater for mooring ballast. The CMS Representative will designate the ballast tanks and amounts to be loaded in each tank. The ship's crew will load the ballast under the direction of the Chief Officer or CMS Representative. Per the manufacturer's specification, the ship's crew shall treat each ballast tank with owner's supplied Drew/Ameriod C.I.L.. Rust Inhibitor. The appropriate tank vents will be in the open position. All tank valves, for tanks containing ballast water, will be chained shut and locked from owner's supply. This item shall be accomplished in conjunction with Item 225.

ITEM 490      NAME BOARDS

1. Remove Ship's port and starboard name boards. Wash with detergent, dry and stow in wheelhouse. Bag stainless steel fastening and tie to each name board.